

### REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 34 and 48 have been cancelled, and claims 33, 37, 39, 40, 45, and 46 have been amended. Support for the amendments is provided for example in cancelled claim 34 and paragraphs [0046]-[0048] of the published specification. The amendments have been drafted to overcome the 35 USC 112, second paragraph, rejections applied to claims 39, 40 and 46. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 50 and 51 stand withdrawn from consideration as being directed toward non-elected subject matter.

Claim 33 was rejected, under 35 USC §102(e), as being anticipated by Adachi et al. (US 6,983,167). Claims 34-37, 39, 40 and 45-47 were rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Gurbuz et al. (US 7,301,924). Claim 38 was rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Gurbuz and LeBlanc et al. (US 5,508,707). Claims 39, 40, and 43 were rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Gurbuz and Patel et al. (US 6,865,185). Claim 41 was rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Karimi et al. (US 2001/0046882). Claim 42 was rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Patel. Claims 44 and 49 were rejected, under 35 USC §103(a), as being unpatentable over Adachi in view of Gurbuz, Patel and Karaoguz (US 2004/0029620). To the extent that these

rejections may be deemed applicable to the amended claims present herein, the Applicants respectfully traverse as follows.

Claim 33 now defines a medium access control system that uses, upon carrying out communication between an access point and stations, a superframe having a timing structure that comprises: (i) a periodically transmitted beacon frame that reports existence of a wireless network and provides a timing reference to each station on a network; (ii) a supervised access mode that is a period in which: (a) an access point antenna is configured in a directional pattern, (b) an access point controls access to a wireless channel and adjusts transmission with users by utilizing antenna characteristics such that a plurality of simultaneous transmissions can be implemented on the same channel, and (c) each station follows predetermined rules defined by the access point or by a network coordinator; (iii) an unsupervised access mode that is a period in which the access point antenna is configured in an omni-directional pattern and each station executes rule-free, contention-based access to a medium; and (iv) signaling, whereby the access point starts or terminates the supervised access mode or the unsupervised access mode. The claimed subject matter provides an advantage of increasing the total throughput of a WLAN and facilitating the design and manufacture of low-priced user devices/stations having a simple and small form factor (see paragraphs [0016]-[0018] of the published specification).

Neither Adachi nor Gurbuz discloses the superframe now recited in claim 33. For this and the following reasons, Adachi and Gurbuz also cannot disclose the instant claimed subject matter of supervised and unsupervised access modes.

The Office Action proposes that Adachi discloses the Applicants' claimed periodically transmitted beacon frame and supervised access mode (see Office Action page 5, first and second

paragraphs). However, the Office Action acknowledges that Adachi does not disclose the claimed unsupervised access mode and signaling (see Office Action page 5, third paragraph). To overcome this deficiency, the Office Action proposes that Gurbuz discloses the claimed unsupervised access mode, signaling, periodically transmitted beacon frame, and supervised access mode (see Office Action page 5, last paragraph, through page 6, third paragraph). In particular, the Office Action proposes that the claimed supervised access mode corresponds to Gurbuz's disclosed MIMO (see Office Action page 6, lines 4-5) and the claimed unsupervised access mode corresponds to Gurbuz's disclosed SISO (see Office Action page 6, line 9).

However, Gurbuz's MIMO and SISO are communication schemes. MIMO and SISO communication schemes differ from the Applicants' claimed supervised and unsupervised access modes, which refer to modes of the claimed superframe. As mentioned above, Adachi and Gurbuz do not disclose the claimed subject matter of a superframe and, thus, cannot disclose the claimed supervised and unsupervised access modes of a superframe.

Moreover, Adachi and Gurbuz do not disclose the Applicants' claimed subject matter of:

- (1) allowing an access point to control access to a wireless channel and adjust transmissions with users such that a plurality of simultaneous transmissions can be implemented on the same channel;
- (2) allowing each station to follow predetermined rules defined by the access point or by a network coordinator; and
- (3) allowing each station to execute rule-free, contention-based access to a medium.

Accordingly, the Applicants submit that Adachi and Gurbuz, even if combined as proposed in the Office Action, would still lack the above-noted features of claim 33, and thus, these references, considered individually or in combination, do not render obvious this claim.

Therefore, it is submitted that the rejections applied to claims 38-44 and 49 are obviated and allowance of claim 33 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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